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BCG-VACCINATION CAMPAIGN IN ADEN COLONY

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SYNOPSIS

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A mass BCG-vaccination campaign was undertaken in Aden Colony during February-May 1952 by WHO/UNICEF in co-operation with the Directorate of Medical Services. Over 31,000 persons (about one-fourth of the total population) were given an intradermal 5 TU test, and 22,000 returned for the reaction to be read. Of these, about one-third were classified as negative and all but a very few of them were given an intradermal injection of BCG vaccine. Of those vaccinated, over half were children of school-age. The results obtained in this campaign are described with particular reference to the number and size of tuberculin reactions, and the results of follow-up examinations in nearly 2,000 schoolchildren.

The international mass BCG-vaccination programmes now being assisted by WHO and United Nations Children's Fund (UNICEF) stem from the work started by Danish Red Cross missions to several war-torn countries early in 1947. Soon joined by the Norwegian Relief for Europe and the Swedish Red Cross, and, in March 1948, by UNICEF, the International Tuberculosis Campaign (ITC) conducted mass BCG programmes in 23 countries, tuberculin-testing a total of nearly 30 million persons and vaccinating about 14 million during the next three years. WHO assisted the ITC by giving technical guidance; the WHO Tuberculosis Research Office compiled and analysed the results and prepared reports of the campaigns. Reports have now been published documenting the work of the ITC in 16 countries.

Since June 1951, when the ITC ended, international BCG programmes have been conducted by WHO/UNICEF. The present report is the first of a series documenting the work assisted by WHO/UNICEF. The report describes briefly the organization and results of the vaccination programme

744 in Aden Colony, with special reference to the pattern and prevalence of naturally acquired tuberculin sensitivity and the level of tuberculin sensitivity induced by BCG vaccination in the school-aged population.

The Campaign

At the request of the Government of Aden, a BCG campaign was started by WHO and UNICEF, in co-operation with the Directorate of Medical Services, on 28 January 1952.

The campaign was planned for a systematic coverage of children and young adults throughout the Colony. During the first month, testing and vaccinating were limited to the schoolchildren; in the following months, the non-school population was summoned to public centres established in the different sectors.

Intensive propaganda by means of pamphlets, posters, loudspeakers, film shows, and meetings resulted in a reasonably good turn-out of the population, although it was found that relatively few women attended the centres. A house-to-house campaign was therefore scheduled to follow the main campaign, which ended on 20 May 1952. The material presented in this report covers the main campaign only.

The pre-vaccination testing and the vaccinating were carried out by a team consisting of one doctor and two nurses: one of the nurses was assigned to the team by the Government, the doctor and the other nurse were WHO staff members. A single Mantoux 5 tuberculin unit (TU) test was given in the dorsal aspect of the left forearm; the tests were read at 3-4 days, reactions of 5 mm or more of induration being classified as positive. Vaccination of negative reactors was made by intradermal injection in the left deltoid region, the dose being 0.075 mg of BCG culture in 0.1 ml of diluent.

The tuberculin used was purified protein derivative (PPD) lot RT XXII, prepared by Statens Seruminstitut, Copenhagen, and the vaccine was prepared by the Agouza Serum and Vaccine Institute, Cairo. Both the tuberculin and the vaccine were sent to the team in refrigerated containers and were kept cold in the field when not in use. To shield the vaccine from the traumatic effect of sunlight when the ampoules were being used, they were placed in wooden blocks and covered with paper cups; and vaccination was always performed indoors or on shaded verandas.

Statistical data on the campaign are derived from two types of records made during the work: individual cards for 18% of the population tested and group cards for the remainder. Individual cards were used only in schools where each person tested could be accurately identified; these records were to obtain information on the pattern of naturally acquired tuberculin sensitivity and, later, the response to BCG vaccination. (See sample card, Annex 1.) The name, age, and sex of each student were entered

on a card on the first visit, and a record was made of the test given. On the next visit, when the reactions were read, measurements of the size of the reaction (transverse diameter of induration) were recorded and, if vaccination was given, this was noted together with the lot number of the vaccine and the initials of the vaccinator. Follow-up visits were made after several months to examine the post-vaccination responses.

Group cards were used for the testing and vaccinating in public centres and in a few of the schools. (See sample card, Annex 2.) The number of persons tested during the first visit to a centre was simply tabulated on one side of a single card by three broad age-groups: 0-6 years, 7-14 years, 15 years and over. On the second visit, the number of positives, vaccinated, and negatives not vaccinated, in each of the three age-groups, was recorded on the other side of the same card. Each person tested was marked with a colour stain above the site of the test, the shape of the mark indicating the day of the week on which the test was given; this made it possible on the reading day to check when the test had actually been given.

The data reported on both kinds of cards were tabulated in the monthly statistical reports giving the overall results of the campaign. The numbers of tested, positives, vaccinated, and negatives not vaccinated during the period February-May 1952 are given in table I by month, population group, and age-group. Altogether, 31,287 persons were tuberculin-tested; of these, 22,110 (about 71%) returned to have the test read. Percentages of completed tests among the total numbers tested, according to population group and the three age-groups, are as follows:

Age-group (years)	School- children	General public	Total
0-6	89.6	53.7	56.8
7-14	96.1	71.3	80.6
15+	96.6	64.4	66.3
All ages	95.7	64.8	70.7

It will be seen that the percentage of schoolchildren completing the test is uniformly high, averaging around 96 for all age-groups. In contrast, records for the non-school population show that the percentage varies from about 54 for the age-group 0-6 years to about 71 for the age-group 7-14 years, with an average of only 65 for completed tests.

The figures of the 1946 census gave 52,657 males and 29,202 females. About 80% of the population are Arabs. In 1952, the total population was estimated at 100,000-120,000. The campaign aimed at testing everybody aged 1-18 years, and it is estimated that roughly half of this age-group was covered by the campaign in terms of completed tests. As shown in table I, 7,751 persons (about 35%) of the population having a completed test were vaccinated; of these, 4,795 persons (62%) belonged to the age-group 7-14, 2,135 (28%) to the age-group 0-6, and 821 (10%) to the age-group 15 years and over. Only 14 negatives were not vaccinated.

TABLE 1. NUMBER OF PERSONS TUBERCULIN-TESTED AND VACCINATED WITH BCG IN ADEN COLONY DURING FEBRUARY-MAY 1952

Month	Population	Number starting test				Number completing test											Number not completing test
						Positive *			Vaccinated			Negative not vaccinated			Total		
		Age-group (years)			Total	Age-group (years)			Age-group (years)			Age-group (years)					
		0-6	7-14	15 +		0-6	7-14	15 +	0-6	7-14	15 +	0-6	7-14	15 +			
February	Schools	338	4,427	782	5,547	96	2,000	560	207	2,272	198	2	4	2	5,341	206	
March	Schools	64	260	29	353	8	71	14	47	160	11	—	—	—	311	42	
	Public centres .	2,617	4,236	6,676	13,529	247	1,868	4,009	1,198	1,275	304	—	—	—	8,901	4,628	
April	Schools	1	56	3	60	1	28	1	—	22	—	—	—	—	52	8	
	Public centres .	1,615	3,698	6,335	11,648	159	1,466	3,749	667	1,042	295	2	—	4	7,384	4,264	
May	Public centres .	38	34	78	150	2	10	56	16	24	13	—	—	—	121	29	
Total	Schools	403	4,743	814	5,960	105	2,099	575	264	2,454	209	2	4	2	5,704	256	
	Public centres .	4,270	7,968	13,089	25,327	408	3,344	7,814	1,861	2,341	612	2	—	4	16,406	8,921	
Grand total		4,673	12,711	13,903	31,287	513	5,443	8,389	2,135	4,795	821	4	4	6	22,110	9,177	
Grand total (all ages)		31,287				14,345			7,751			14			22,110	9,177	

* Persons reacting with 5 mm or more of induration to Mantoux 5 TU test.

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Post-Vaccination Examinations

Between 28 April and 17 May 1952, a retest survey was carried out in 22 of the 27 schools covered by the mass campaign. The schools selected for retesting were those in which individual cards had been used; they included about 92% of the 2,917 schoolchildren vaccinated during the campaign. 744

The vaccinations were given during February 1952 in the schools where retesting was done; the interval between vaccination and retesting thus ranged from 9 to 14 weeks. The vaccine used had been lots number 153, 154, 155, and 156. The retest work was performed by the two WHO team members; the nurse gave and read all the tests, while the doctor measured the children's vaccination lesions on the first visit and examined for enlarged lymph-nodes on the second. Examination of the lymph-nodes was, however, made solely among boys and in 12 schools only. The cards were handled by a secretary, who recorded the findings dictated by the doctor and the nurse; their readings were thus not influenced by knowledge of previous findings.

Mantoux tests with 5 TU of the Danish PPD lot number RT XXII were used. This dose was given in 0.1 ml of diluent, and, to permit accurate measurement of the volume injected, tight, non-leaking syringes were used. No re-vaccination was given.

The extent of the retesting survey was as follows:

Children starting retest and examined for vaccination lesion	2,032
Children completing retest	1,907
Children examined for enlarged lymph-nodes (boys only)	1,193

Of the vaccinated children in the schools surveyed, approximately 71% completed the retest; in all, 25% of the total vaccinated population were retested. The sex proportion of the population retested is about 70% males and 30% females.

Results

Pre-vaccination tuberculin sensitivity

The basic pattern of the naturally acquired tuberculin sensitivity in Aden Colony schoolchildren is shown in fig. 1 by the frequency distributions of the size of induration of reactions to the Mantoux 5 TU test. Distributions are given for the age-groups 6-8, 9-11, 12-14, and 15-18 years.

The distributions have the bimodal form characteristic of unvaccinated populations. Each is divided into two groups: the children in one group

744 have either no reaction or very small ones (negative reactors); in the other, the reactions are grouped rather symmetrically around a fairly large average reaction (positive reactors). However, as the separation of the tested population into "negative" and "positive" reactors is not absolute—the two groups overlap to some extent—an arbitrary dividing line has to be drawn at some point on the size scale. For the mass campaign, a reaction of 5 mm or more of induration to the 5 TU test was considered positive, as recommended by the WHO Expert Committee on Tuberculosis in September 1950.¹ And, as may be seen in the distributions, this corresponds quite well to the point of low frequency (6-7 mm) between the two modal groups in the populations tested.

The distributions in fig. 1 also show the effect of age on the relative proportions of persons with positive and negative reactions. About two-thirds of the children aged 6-8 years are in the left-hand (negative) group but, with increasing age, this group becomes smaller as the right-hand (positive) group becomes larger, so that about two-thirds of the children in the age-group 15-18 are found to be positive. More-detailed figures are given in table II and fig. 2, showing the increase in frequency of tuberculin reactors with age, from an average of about 33% positive at 6 years to 65% at 14 years. There appears to be little difference between the boys and the girls in the frequency of positive reactors at each age within this range.

As these results are based on the findings recorded on individual cards for children in 22 schools—mainly for the age-group 7-14 years—it is not known if they are representative for all children in this age-group in Aden Colony. No detailed information on age and size of reactions is available for the non-school population when group cards were used, as only the numbers of positive and negative reactors in each of the three age-groups (0-6, 7-14, and 15 years and over) were reported. The difference in percentage of positive reactors between the children aged 7-14 years tested in schools and in public centres—about 46% compared with about 59% (see table I)—may be a real one reflecting differences in economic and social conditions; however, it must be remembered that, while most school-children completed their tests, a relatively large number of the non-school children did not return for the reading. If a high proportion were negative, the result would be a disproportionate number of positive reactors among those who did return. Moreover, the non-school groups possibly include a higher proportion of older persons and this, too, could account for a higher proportion of positive reactors.

Post-vaccination tuberculin sensitivity

The distribution of post-vaccination tuberculin reactions for all children retested is given in fig. 3; for comparison, the distribution of pre-vaccination

¹ World Health Organization, Expert Committee on Tuberculosis (1951) *Wld Hlth Org. Techn. Rep. Ser.* 32, 10

FIG. 1. FREQUENCY DISTRIBUTIONS BY SIZE OF REACTIONS TO INTRADERMAL 5 TU TESTS, BY AGE, AMONG SCHOOLCHILDREN IN ADEN COLONY

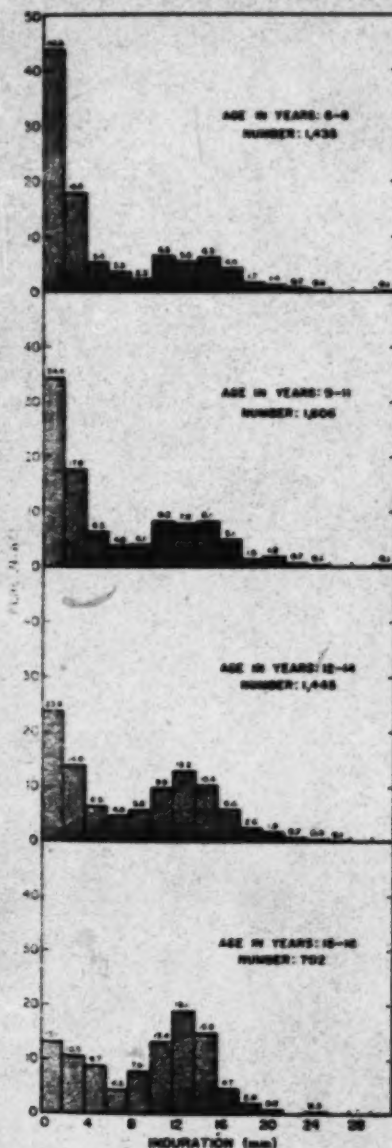
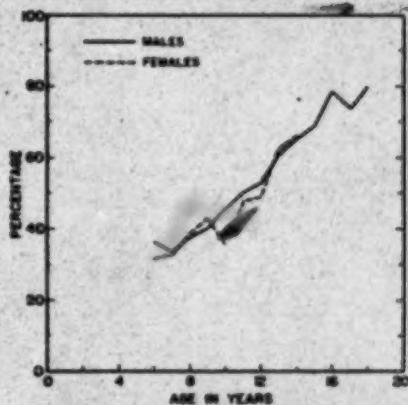
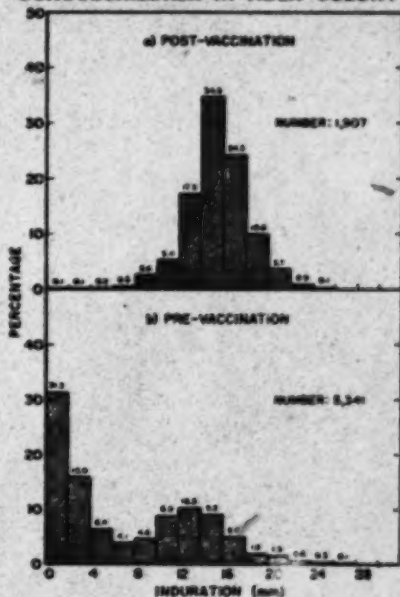


FIG. 2. PERCENTAGES OF TUBERCULIN POSITIVES, BY AGE AND SEX, AMONG SCHOOLCHILDREN IN ADEN COLONY*



* Positive reactions defined as 5 mm or more of induration to the intradermal 5 TU test.

FIG. 3. FREQUENCY DISTRIBUTIONS BY SIZE OF REACTIONS TO INTRADERMAL 5 TU TESTS IN VACCINATED (a) COMPARED WITH UNVACCINATED (b) SCHOOLCHILDREN IN ADEN COLONY



744 TABLE H. RESULTS OF INTRADERMAL I TU TESTS IN SCHOOLCHILDREN, AGED 6-18 YEARS, IN 22 SCHOOLS IN ADEN COLONY, 1952

Age in years	Number completing test		Number of positives*		Percentage of positives	
	males	females	males	females	males	females
6 . . .	86	121	32	38	36.0	31.4
7 . . .	347	220	117	71	33.7	32.3
8 . . .	426	230	166	81	38.8	35.2
9 . . .	384	183	154	76	40.1	42.6
10 . . .	380	159	174	57	45.8	35.8
11 . . .	386	115	193	56	50.1	47.8
12 . . .	403	104	231	51	53.3	48.0
13 . . .	411	80	250	56	60.8	62.2
14 . . .	363	44	237	29	65.3	65.9
15 . . .	245	23	188	11	69.0	..
16 . . .	203	16	159	10	78.3	..
17 . . .	130	4	96	2	73.8	..
18 . . .	75	2	63	2	79.7	..

* Reactors with 5 mm or more of induration.

.. Percentages not given because of small figures.

tuberculin-test results is also given for the group from which those to be vaccinated were selected. There is a clear difference between the two distributions. The post-vaccination reactions are grouped fairly symmetrically around a central value in the right-hand part of the scale, thus constituting a unimodal distribution: the pre-vaccination reactions form a bimodal distribution. All, or almost all, the vaccinated children had acquired some degree of tuberculin allergy, and the position of the vaccinated group on the size scale corresponds rather closely with the position of the natural positive group in the unvaccinated population shown below. In fact, the modal reaction for the vaccinated is actually a few mm larger than that for the natural positives—14-15 mm compared with 12-13 mm. This difference may, however, represent differences between the readers, as the post-vaccination tuberculin tests were read by just one person, the pre-vaccination tests by three. Even so, it is evident from this material that the allergy induced by BCG vaccination may be about as strong as that produced by natural infection.

Table III gives the results for individual schools grouped according to vaccine lot number and by post-vaccination interval in weeks. The level of allergy produced may be characterized by the mean size of reactions, given at the bottom of the table for each school, and for each group of

TABLE XI. DISTRIBUTIONS BY SIZE OF POST-VACCINATION REACTIONS TO INTRADERMAL T U TESTS AMONG SCHOOLCHILDREN, BY VACCINE LOT NUMBER, POST-VACCINATION INTERVAL, AND SCHOOL, ADEN COLONY, 1952

Vaccine lot No.	153			154						155						156						Total	
Post-vaccination interval (in weeks)	14	13	14	13			14	13		12	11				11	10	9	10					
Serial No. of school	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	all schools
Induration (mm)																							
0	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
3	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
4	1	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
5	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	2
6	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	3
7	—	—	1	—	—	—	—	2	1	—	—	—	—	—	—	1	—	—	2	—	—	—	7
8	2	2	—	—	—	—	3	1	—	—	2	—	—	—	—	2	—	—	—	1	—	—	13
9	3	2	3	2	3	1	—	3	—	1	—	1	—	1	3	1	—	3	2	2	4	—	36
10	2	5	1	1	—	—	1	2	1	1	1	—	—	1	2	—	—	6	3	1	1	30	
11	9	7	1	4	6	—	3	3	1	2	2	7	3	—	2	4	1	2	3	6	3	4	73
12	5	6	9	8	13	3	5	8	—	9	7	7	3	1	1	6	1	2	6	17	9	9	134
13	16	14	4	8	13	2	4	6	2	11	9	7	2	2	7	20	5	1	11	29	8	15	196
14	44	20	10	25	26	9	5	19	6	13	12	17	9	8	12	44	8	10	20	36	14	18	385
15	25	17	17	16	14	7	9	21	7	10	12	17	3	12	12	25	6	6	5	16	5	16	276
16	35	21	14	13	16	1	9	26	7	15	9	11	14	15	14	37	2	7	4	11	13	23	317
17	11	9	5	11	5	—	5	17	4	8	5	6	7	4	7	18	1	1	2	9	1	11	147
18	10	11	5	12	6	1	3	15	2	4	4	—	1	6	6	3	1	—	1	3	4	102	
19	10	1	1	6	7	—	5	22	—	5	1	2	1	2	1	11	2	1	—	1	2	8	89
20	6	2	1	1	1	1	3	9	3	—	2	—	1	3	1	6	—	—	—	1	3	44	
21	5	2	3	1	—	—	—	4	2	—	—	—	—	2	—	4	—	—	—	—	—	26	
22	2	—	1	2	—	—	—	2	—	—	—	—	—	—	—	1	—	—	—	—	3	8	
23	1	—	—	3	1	—	—	3	—	—	—	—	—	—	—	1	—	—	—	—	—	9	
24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
>25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	2	
Total	187	120	77	113	111	25	56	168	36	79	64	82	43	52	65	193	30	31	62	132	65	176	1,207
Mean size of induration	15.2	14.5	14.8	15.4	14.6	14.2	14.8	15.7	15.6	14.8	14.7	14.2	15.1	15.6	15.1	15.3	14.7	14.7	12.8	13.7	14.5	14.9	14.8
	14.9			15.2						14.8						14.5							

744 schools where vaccination had been performed with the same lot of vaccine. There are only small deviations from the average value of 14.8 mm. Analysis of the results according to age and sex showed little variation with age, but the reactions were slightly larger for boys than for girls: 15.1 mm compared with 14.5 mm.

Local response to vaccination

Examinations for vaccinal lesions at the time of the retesting showed that all the children retested had a reaction at the site of vaccination.

The character of the reactions ranged from merely indurated lesions to crusted lesions and scars; in some children (about 8%), examined 9-11 weeks after vaccination, unhealed ulcers were observed. As it is difficult to classify uniformly lesions examined at different intervals after vaccination, no attempt will be made to distinguish between the different type of lesions found.

To provide information on the size of the vaccinal lesions the frequency distribution by size (transverse diameter in mm) of the indurated lesions and scars is given below:

Vaccination lesion (mm)	Number	%
0-1	0	—
2-3	0	—
4-5	91	4.50
6-7	660	32.50
8-9	752	37.00
10-11	359	17.60
12-13	133	6.60
14-15	26	1.30
16-17	9	0.40
18-19	0	—
20-21	1	0.05
22-23	1	0.05
Total . . .	2,032	100.00

It appears that none of the vaccinal lesions measured less than 4 mm; most of them were smaller than 14 mm and only a few larger than 17 mm. The average size (8.4 mm) varied but little among groups of children given different lots of vaccine and examined at different intervals after vaccination.

No complications at the vaccination site were reported; nor did the examination for enlarged lymph-nodes in both the right and left axillary and supraclavicular regions reveal any complications. Non-suppurative nodes with enlargement of 2-2½ cm inclusive were, however, found in the right axillary region in 1.9%, and in the left in 1.3%, of the males examined (table IV). Most of the nodular enlargements were therefore probably not related to vaccination.

TABLE IV. RESULTS OF EXAMINATIONS FOR REGIONAL LYMPH-ADENOPATHY 9-14 WEEKS AFTER VACCINATION (IN LEFT DELTOID REGION) AMONG BOYS FROM 12 SCHOOLS IN ADEN COLONY, 1952 744

Lymph-node findings in axillary and supraclavicular regions	Left side		Right side	
	number	%	number	%
No enlargement or less than 1 cm	996	83.5	962	82.3
Enlargement of				
1-1 1/2 cm	181	15.2	188	15.8
2-2 1/2 cm*	16	1.3	23	1.9
3 cm or larger	—	—	—	—
Total examined	1,193	100.0	1,193	100.0

* All found in the axillary region.

The BCG-vaccination programme in Aden Colony was organized by Dr. E. Cochrane, formerly Director of Health Services, Aden Colony, on behalf of the Government. The programme was planned and technically supervised by Dr. Herbert Møller, BCG Adviser, World Health Organization Regional Office for the Eastern Mediterranean. 114

The field work reported in detail in this report was largely the responsibility of Dr. Knut Berg (WHO), Miss Agnes Bentsen (WHO), and Mrs. Jane Fazem (Aden). The post-vaccination tuberculin tests were given and read by Miss Bentsen; Dr. Berg measured the vaccinal lesions and examined for regional lymph-adenopathy.

RÉSUMÉ

Une campagne de vaccination systématique au BCG a été entreprise à Aden, dès février 1952, par l'OMS et le FISE, en collaboration avec les services de santé gouvernementaux. Durant le premier mois, les tests et la vaccination ont été limités aux écoliers et aux jeunes adultes. Ils furent étendus, plus tard, au reste de la population. Les réactions de 5 mm et plus au Mantoux 5 UT ont été considérées comme positives. Toutes les précautions furent prises pour que la tuberculine et le BCG soient transportés à basse température et que le vaccin soit conservé et utilisé à l'abri de la lumière solaire. 000

La campagne avait pour but de soumettre aux tests tous les habitants de 1-18 ans. Ce but ne put être réalisé que pour environ la moitié d'entre eux. On vaccina 35% des sujets soumis à l'épreuve prévacinale. En avril-mai 1952, soit 9-14 semaines après la vaccination, on procéda aux tests postvaccinaux.

La courbe de distribution des réactions prévacinales présente le caractère bimodal caractéristique des populations non vaccinées : environ deux tiers des enfants de 6-8 ans sont « négatifs ». Leur nombre diminue avec l'âge, de sorte que deux tiers environ des enfants de 15-18 ans sont « positifs ».

La courbe de distribution des réactions à l'épreuve postvaccinale est unimodale. Presque tous les enfants vaccinés avaient acquis un certain degré d'allergie, comparable à celui que l'on avait observé chez les enfants positifs à l'épreuve prévacinale.

Tous les enfants présentaient des réactions locales, allant de la simple induration à des croûtes et cicatrices. Chez 8% d'entre eux, des ulcères non cicatrisés ont été observés. Aucune complication ganglionnaire n'a été notée.

Annex 1

FACSIMILE OF INDIVIDUAL CARD USED IN ADEN COLONY

Front

1. Surname	3 Date of birth			4 Age	9 Institution
	day	month	year 19 ..	in years	
2 First name	5 Sex		☐	Female ☐	
	Male				
6 House No., Street					
7 Town/Village		8 District		10 Subgroup of institution	
11 Date of testing	Test	Date of reading	mm induration	Remarks	Reader
12 BCG No.	Vaccinator		Remarks		

Individual Card

Back

13 Re-testing					
Date of testing	Test	Date of reading	mm induration	Remarks	Reader
14. Vaccination lesion					
Date	Description			Remarks	
15. Re-vaccination					
Date	BCG. no.		Vaccinator	Remarks	

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Annex 2

FACSIMILE OF GROUP CARD USED IN ADEN COLONY

Front 000

Team no. : _____		Serial no. : _____		Date tested : / 195 _____	
District : _____		Individual cards used : yes ☐ no ☐			
Group : _____		If yes, state total number of persons registered in group : _____			
Address : _____					
Age group 0-6 years	Tested				
	Total				
Age group 7-14 years					
	Total				
Age group 15 years & more					
	Total				
Group card					Total all ages

Back

Date read & vaccinated : / 195 _____		Vaccine lot number : _____	
Reader : _____		Vaccinator : _____	
Age group 0-6 years	Positives	Vaccinated	Negatives not vaccinated
1 EVEN SEX ☐			
2 MORE MALES ☐			
3 MORE FEMALES ☐	Total	Total	Total
Age group 7-14 years			
1 EVEN SEX ☐			
2 MORE MALES ☐	Total	Total	Total
3 MORE FEMALES ☐			
Age group 15 years & more			
1 EVEN SEX ☐			
2 MORE MALES ☐	Total	Total	Total
3 MORE FEMALES ☐			
Total all ages		Total all ages	Total all ages
Total number read :		Number not read :	

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[For information as to the procedures and results of a tuberculin campaign by the United Nations World Health Organization and Children's Fund, see complete text.]